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| 09/436,360 | 11/09/1999 | ANDREW J. SANDERSON | PM244889/98 | 6505 |

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EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1711

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Please find below and/or attached an Office communication concerning this application or proceeding.

T-D - 16

Office Action Summary

Application No.
09/436,360

Applicant,
Sanderson et al.

Examiner
Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 5, 2001
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 41-47 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 41-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-13 and 41-47 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 31-41 of copending Application No. 09/436,440. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is drawn to polyisocyanate based elastomers derived from equivalent reactants.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-13, 41 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language, "below about 75°C", "above about -20°C", and "below about 60°C", renders the claims indefinite, because "about" encompasses values slightly above or below the

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recited values; therefore it is unclear if the language is met by values of 75° or higher, -20° or lower, and 60° or higher, respectively.

Despite applicants' response, it cannot be determined what exact meaning or significance can be ascribed to "below" or "above", in view of the use of "about". Applicants' response has not clarified the issue.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The subject matter of claim 4, as amended, fails to further limit claim 1. Since claim 1 now requires the A blocks to be crystalline below about 60°C, the subject matter of claim 4 is not limiting at temperatures exceeding 60° C. For example, according to claim 1, the A block can be non-crystalline at 61° C; however, claim 4 cannot allow for this possibility, yet it depends from claim 1.

5. Claims 43-47 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for elastomers wherein the A blocks are crystalline below about 75° C and the B blocks are amorphous above about -20° C, does not reasonably provide enablement for elastomers wherein the A blocks and B blocks may be crystalline or amorphous, respectively, at any temperature. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

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Applicants have provided enablement only for elastomers which meet the aforementioned crystalline or amorphous temperature requirements. The recitation of monomers that art used to produce the segments does not insure that the temperature properties will be realized.

6. Claims 41 and 42 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Support has not been found for the subject matter of the claims. Page 6, lines 15-17 refer to the polymer rather than the A blocks.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-13 and 41-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wardle ('613) in view of Biddle et al ('794) and Hinshaw et al ('603).

Wardle discloses the production of polyurethane elastomers, wherein the polymer comprises hard and soft segments linked by the reaction of the isocyanate reactive A segment and B segment with diisocyanates and linking compounds. Patentee further discloses the use of 2, 4-toluene diisocyanate as a suitable asymmetric diisocyanate. See abstract and columns 4-9.

9. While Wardle discloses hard segments which meet those claimed by applicants, patentee fails to disclose the specific use of an oxirane-based soft segment, though patentee further fails to specifically limit the compound by species. However, the position is taken that the use of oxirane-based polymers was known to be useful as soft segments within hard segment/soft segment thermoplastic elastomers at the time of invention. Biddle et al disclose at column 6 the use of polyglycidyl azide and polyglycidyl nitrate as soft blocks within such polymers.

Furthermore, Hinshaw et al disclose at column 1 that such soft blocks contain secondary hydroxyl groups that are reactive with isocyanates. Hinshaw et al. further set forth procedures for enhancing the reactivity of oxirane-based polymers with polyisocyanates.

10. Therefore, in view of the teachings of the secondary references, it would have been obvious to utilize an oxirane-based segment as the soft segment of Wardle, so as to arrive at the instant invention.

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11. Applicants have argued that one would not have been motivated to incorporate oxirane-based polymers into the composition of Wardle due to the decreased reactivity of the oxirane-based polymer's secondary hydroxyl group. This argument is considered to be deficient for three reasons. Firstly, a key concept of Wardle is based on various reactive groups having different reactivities; therefore, patentees were acquainted with the problems and solutions associated with producing polymers from reactive units having decreased reactivities. Secondly, Hinshaw et al. disclose that secondary group containing oxirane-based polymers can be cured with polyisocyanates at column 1, lines 42-44. Thirdly, Hinshaw et al provide an additional means or teaching for rendering oxirane-based polymers more reactive with isocyanates; therefore, the secondary reference addresses and solves the very problem that applicants have relied upon to argue that it would not have been obvious to utilize oxirane-based polymers in Wardle. It is noted that applicants' claims are open to the modifications of oxirane-based polymers disclosed by Hinshaw et al.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period


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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.

Sergent:mv

December 13, 2001


RABON SERGENT
PRIMARY EXAMINER